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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/845,588	04/30/2001	Xiaohui Wang	82295WFN	3243

7590 07/27/2004  
Thomas H. Close  
Patent Legal Staff  
Eastman Kodak Company  
343 State Street  
Rochester, NY 14650-2201

EXAMINER

KAO, CHIH CHENG G

ART UNIT PAPER NUMBER

2882

DATE MAILED: 07/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/845,588

Applicant(s)

WANG ET AL.

Examiner

Chih-Cheng Glen Kao

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. The drawings were received on June 23, 2004. These drawings are acceptable.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asahina (JP 07-067866) in view of Relihan et al. (US Patent 6233310).
3. Regarding claim 1, Asahina discloses a method for acquiring a radiographic image (Fig. 4) comprising: positioning an object (Fig. 4, #12) between a stationary but pivotally mounted source of x-rays (Fig. 4, #11) and a flat capture device (Fig. 4, #13); moving the flat device in a planar direction parallel to a known imaging dimension (Fig. 4, #13) to sequential contiguous positions to acquire a sequence of images (Paragraph 29); and rotating said source of x-rays about a first fixed axis perpendicular to the direction of moving said device and which is in a plane spaced from and parallel to the planar direction in coordination with said moving to project x-rays from the source to the device (Fig. 4, #11).

However, Asahina does not disclose a digital image capture device.

Relihan et al. teaches a digital image capture device (col. 3, lines 38-43).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the method of Asahina with the digital image capture device of Relihan et al., since one would be motivated to incorporate this to provide more capabilities (col. 3, lines 38-43) as implied from Relihan et al. or to eliminate elements, such as an analog to digital converter, to make the apparatus more compact.

Also note that Relihan et al. shows that image intensifiers and digital detectors are equivalent structures known in the art. Therefore, because these two devices were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute one for another.

4. Regarding claim 3, Asahina further discloses the source rotated about an axis coincident with the x-ray focal spot (Abstract).
5. Regarding claim 4, Asahina further discloses the source of x-rays rotated about an axis (Fig. 4, #11) the distance of which from the x-ray focal spot (Abstract) of the source is far less than the distance from the source of x-rays to the image capture device (Fig. 4, #13).
6. Regarding claim 5, Asahina further discloses an elongated human body part (Fig. 4, #12).

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7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asahina in view of Relihan et al. as applied to claim 1 above, and further in view of Polkus et al. (US Patent 6422749).

Asahina as modified above suggests a method as recited above.

However, Asahina does not disclose adjusting the aperture of a collimator.

Polkus et al. teaches adjusting the aperture of a collimator (Fig. 2, #24, and col. 1, lines 30-32).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to incorporate the suggested method of Asahina as modified above with the adjustment of the collimator of Polkus et al., since one would be motivated to incorporate this to better adjust the field of view (col. 1, lines 24-34) as shown by Polkus et al.

### ***Response to Arguments***

8. Claim objections in the Office Action mailed January 7, 2004, have been withdrawn in light of the amendment filed on June 23, 2004.

9. Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

Regarding Applicant's arguments that Polkus et al. teaches a non-moving x-ray source and a non-moving detector, the Examiner disagrees. Note column 3, lines 21-22 and 26-28, of Polkus et al. which discloses a moving x-ray source and detector. Thus, Polkus et al. discloses a moving x-ray source and detector as well as its other teachings as recited above.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (571) 272-2492. The examiner can normally be reached on M - F (9 am to 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



gk



EDWARD J. GLICK  
SUPERVISORY PATENT EXAMINER